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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,541	07/16/2001	Reuel W. Nash	1930.0090001	2299

26111 7590 06/02/2005

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EXAMINER

SINGH, DALIP K

ART UNIT PAPER NUMBER

2676

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/904,541

**Applicant(s)**

NASH ET AL.

**Examiner**

Dalip K Singh

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Response to Amendment*

1. This Office Action is in response to applicant's amendment dated December 14, 2004 in response to PTO Office Action dated September 14, 2004. The amendments to claim(s) 1, 11, 18, 20-26; addition of new claims 27-29 have been noted and entered in the record, and applicant's remarks have been carefully considered resulting in the action as set forth herein below.

2. Applicant's arguments filed December 14, 2004 have been carefully considered but they are not persuasive.

3. Regarding applicant's argument with respect to claims 1, 11, 18 and 20-26 that, "Deering does not disclose validation or optimization of one or more functions", applicant's attention is drawn to U.S. Patent No. 5,914,724 to Deering et al. col. 3, lines 5-10 "...microcode storage may thus be reduced, and lighting performance may be increased by optimizing for the single routine...".

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-26, 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,914,724 to Deering et al.

a. Regarding claims 1, 11 and 18 Deering et al. **discloses** evaluating a mode command to initiate or change a mode, selecting a combination of functions; validating or optimizing one or more of the functions (...microcode storage may thus be reduced, and lighting performance may be increased by optimizing for the single routine... col. 3,

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lines 5-10) and delivering said combination to a microcode processor (floating point processors 152, Fig. 3)(...the command block 142 interfaces...controls the transfer of data...col. 4, lines 59-67...the floating point processors 152A-152F receive high level drawing commands...col. 5, lines 1-12...these commands and data...are passed in turn to floating point processors 152...col. 6, lines 1-14...the L-core block 354 performs most...calculations using...microcode...col. 6, lines 37-47).

b. Regarding claim 2, Deering et al. **discloses** querying a storage medium (memories 152A-152F...32kx36-bit SRAM...are used for microcode and data storage...col. 5, lines 10-12) to select said combination (...the F-Core block 352 is fully programmable, using a 36-bit microword instruction word stored in a 32k word SRAM...the L-Core block 354 performs most lighting calculations using on-chip RAM-based microcode...col. 6, lines 34-38).

c. Regarding claim 3, Deering et al. **discloses** a microcode instruction memory (memories 152A-152F).

d. Regarding claims 4, 5, 12, 13, 17, 19, 20 and 23 Deering et al. **discloses** loading a sequence list into a microcode data memory, wherein said sequence list includes a memory address to said combination (...F-Core block 352...includes a dispatch code that indicates which microcode procedure to run...col. 7, lines 53-63).

e. Regarding claims 6, 14 and 21, Deering et al. **discloses** sending a result from said executing step to a processor for pixel processing or additional microcode processing (...each of the floating point blocks 152A-F connects to each of two draw processor 172A and 172B...perform screen space rendering...and operate to sequence ...the completed pixels...col. 5, lines 13-26).

f. Regarding claim 7, Deering et al. **discloses** microcode processing being done prior to said executing step (See col. 8, lines 15-28).

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g. Regarding claims 8-10, 15, 16 and 22, Deering et al. **discloses** three dimensional graphics, animation scene and video game rendering (...a three-dimensional (3-D) graphics accelerator...comprises...a video monitor or display device...various types of display monitor or devices...col. 3, lines 45-61).

h. Regarding claim 24, it is similar in scope to claim 8 above and is rejected under the same rationale.

i. Regarding claim 25, it is similar in scope to claim 1 above and is rejected under the same rationale.

j. Regarding claims 26, 27 and 29, Deering et al. **discloses** preprocessing data for said combination to calculate values used repetitively during said executing step (...the command block 142 also pre-processes triangle and vector data and performs geometry data...col. 4, lines 59-65; ...microcode storage may thus be reduced, and lighting performance may be increased by optimizing for the single routine... col. 3, lines 5-10).

### ***Allowable Subject Matter***

6. Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art fails to disclose the validating or optimizing step comprising searching for a faster version of a function selected for said combination.

### ***Conclusion***

7. Applicant's arguments filed December 14, 2004 have been carefully considered but they are not persuasive. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after


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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

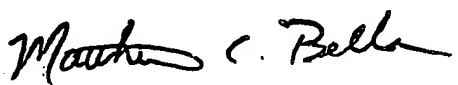
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(571) 272-7792**. The examiner can normally be reached on Mon-Friday (10:30AM-6:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(571) 272-7778**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, please contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dalip K. Singh  
Examiner, Art Unit 2676

dk  
May 30, 2005

  
MATTHEW C. BELLA  
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